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10/601,050	06/20/2003	Anthony M. Olson	P1946US00	8455

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EXAMINER
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ART UNIT	PAPER NUMBER
2621	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _22 January 2008_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-20_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-20_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _20 June 2003_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January

22, 2008 has been entered.

Response to Arguments

2.   Applicant's arguments with respect to claims 1-20 have been considered but are

moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Browne et al. (WO 92/22983) in view of Boyle (U.S. Patent 6,453,115) in view of

Utsunomiya et al. (U.S. Patent Application Publication 2002/0066113).

Regarding claim **1**, Browne et al. discloses a system useful for storing a television program P, comprising: a PVR (100) having a first memory (104), a network interface device (105a), and logic configured to copy the television program P into memory (the controller (105) copies the television program P into memory); and a second memory (104b) in communication with the PVR (100) via the network interface device (105a) (Fig. 1; page 10, line 32 – page 11, line 11). Furthermore, Browne et al. discloses that the system keeps track of the total amount of "on-line" storage capacity (page 11, lines 3-11). However, Browne et al. fails to disclose virtual storage management (VSM) logic configured to track the location of the second memory on the network, and to store a portion of the program P in the second memory; wherein the VSM logic is configured to track one or more logical addresses of the second memory on the network for storing a plurality of portions of the program P including the said portion.

Referring to the Boyle reference, Boyle discloses a system useful for storing a television program P, comprising: a PVR having a first and second memory (col. 6, lines 50-53; col. 10, lines 35-37 – the storage subsystem comprises a hard drive incorporating one or more magnetic disks); virtual storage management (VSM) logic configured to track the location of the second memory on the network, wherein the VSM logic is configured to track one or more logical addresses of the second memory for storing a plurality of portions of the program P (col. 6, lines 38-58; col. 10, lines 31-42; col. 13, lines 50-58).

Therefore, it would have been obvious to one of ordinary skill in the art at · the time the invention was made to have applied the technique of using VSM logic as disclosed by Boyle with the logic that keeps track of the "on-line" storage capacity disclosed by Browne et al. in order to allow the system to know not only know the amount of available "on-line" storage capacity, but to also keep track of where portions of programs are recorded in order to allow the system to more efficiently implement trick play modes. However, Browne et al. in view of Boyle fail to disclose storing a portion of the program P in the second memory.

Referring to the Utsunomiya et al. reference, Utsunomiya et al. discloses a recording system useful for storing a television program P, comprising: a first memory (3), a network interface drive, and logic configured to copy the television program P into memory (control unit 10 copies the television program P into memory); a second memory (4) in communication with the recording system via the network interface device; and a virtual storage management (VSM) logic configured to track the location of the second memory (4) on the network, and to store a portion of the program P in the second memory (4) (Figs. 1 and 11; paragraphs [0083] – [0085]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the teaching of recording a portion of a program onto a different memory when the first memory is full and to use the virtual storage management logic to track all the portions of the program as disclosed by Utsunomiya et al. with the PVR as described by Browne et al. in

view of Boyle in order to allow the PVR to use the memories to their fullest

capabilities as well as to efficiently playback recordings when a portion of a

program is recorded in the first memory and another portion of the program is

recorded in the second memory.

Regarding claim **2**, Browne et al. in view of Boyle in view of Utsunomiya et

al. discloses all the limitations as previously discussed with respect to claim 1

including that the VSM logic is configured to track the total amount of memory

storage on the network that is available for storing at least a portion of a program

(Browne et al: Fig. 3 – auto recording storage allocation (305); page 20, line 38 –

page 21, line 3; Utsunomiya et al.: paragraphs [0044] and [0047]).

Regarding claim **3**, Browne et al. in view of Boyle in view of Utsunomiya et

al. discloses all the limitations as previously discussed with respect to claim 1

including that the VSM logic is configured to track the memory locations of a

plurality of portions P(i) of the program P (Boyle: col. 6, lines 38-58; col. 10, lines

31-42; col. 13, lines 50-58; Utsunomiya et al.: Fig. 11; paragraphs [0083]–

[0085]).

Regarding claim **4**, Browne et al. in view of Boyle in view of Utsunomiya et

al. discloses all the limitations as previously discussed with respect to claim 1

including that the VSM logic is configured to perform at least one of: (a) track

which memory devices on the network are currently active in recording or

playback; (b) track the memory locations of previously stored programs; (d)

inform the user when a memory device holding at least a part of a program is off-

line; (e) request the user to bring on-line a memory device that is off-line; (f)

inform a user before the total available on-line memory runs out; (g) allow the

user to set a memory lower limit for the VSM logic to inform the user prior to

running out of memory; and (h) after informing the user of the memory lower limit

condition, further provide the user the option to erase previously stored programs

in real time (Boyle: col. 6, lines 38-58; col. 10, lines 31-42; Utsunomiya et al.: Fig.

11 – tracks the memory locations of previously stored programs).

Regarding claim **5**, Browne et al. in view of Boyle in view of Utsunomiya et

al. discloses all the limitations as previously discussed with respect to claim 1 as

well as further comprising an archival memory device in communication with the

PVR; and archival storage management (ASM) logic configured to store the

program P on the archival memory device (Browne et al.: page 10, line 32 – page

11, line 11 – the optional storage section may include removable media for long

term storage; Utsunomiya et al.: Figs. 1 and 4; paragraphs [0043] and [0083]-

[0085]).

Regarding claim **6**, Browne et al. in view of Boyle in view of Utsunomiya et

al. discloses all the limitations as previously discussed with respect to claims 1

and 5 including that the archival memory device comprises a DVD-R device

(Browne et al.: page 10, line 32 – page 11, line 11 – the optional storage section

may include removable media for long term storage; Utsunomiya et al.: Figs. 1

and 4; paragraph [0043] – the disk (18) can be optical disk).

Regarding claim **7**, Browne et al. in view of Boyle in view of Utsunomiya et al. discloses all the limitations as previously discussed with respect to claim 1 including that the first memory and the second memory each comprises a hard disk drive (Browne et al: page 10, line 32 – page 11, line 11; Utsunomiya et al.: paragraph [0043] – the disk (18) can be a hard disk).

Regarding claims **8-14**, grounds for rejecting claims 1-7 and 20 apply for claims 8-14 in their entirety.

Regarding claims **15-18**, these are method claims corresponding to the apparatus claims 1, 2, 5, and 20. Therefore, claims 15-18 are analyzed and rejected as previously discussed with respect to claims 1, 2, 5, and 20.

Regarding claim **19**, Browne et al. discloses a method of playing back a program using a PVR, each memory device (104 and 104b) in communication with the PVR, at least one of the memory devices (104b) in communication with the PVR via a network (105a), the method comprising: playing back a program through at least the PVR (playing back a program that is stored in the first memory device (104)); and playing back a program through the network (105a) and through the PVR (playing back a program stored in the second memory (104b)) (Fig. 1; page 10, line 32 – page 11, line 11). However, Browne et al. fails to disclose playing back a program P, wherein the program is stored in at least two portions, each portion is stored on a separate memory device and using VSM logic of the PVR to track locations of each of the portions stored on the

separate memory devices, the locations including one or more logical addresses on each of the separate memory devices.

Referring to the Boyle reference, Boyle discloses a system useful for storing a television program P, comprising: a PVR having a first and second memory (col. 6, lines 50-53; col. 10, lines 35-37 – the storage subsystem comprises a hard drive incorporating one or more magnetic disks); virtual storage management (VSM) logic configured to track the location of the second memory on the network, wherein the VSM logic is configured to track one or more logical addresses of the second memory for storing a plurality of portions of the program P (col. 6, lines 38-58; col. 10, lines 31-42; col. 13, lines 50-58).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have applied the technique of using VSM logic as disclosed by Boyle with the logic that keeps track of the "on-line" storage capacity disclosed by Browne et al. in order to allow the system to know not only know the amount of available "on-line" storage capacity, but to also keep track of where portions of programs are recorded in order to allow the system to more efficiently implement trick play modes. However, Browne et al. in view of Boyle fail to disclose storing a portion of the program P in the second memory.

Referring to the Utsunomiya et al. reference, Utsunomiya et al. discloses a method of playing back a program P, the program stored in at least two portions, each portion stored on a separate memory device, the memory comprising: playing back a first portion; and playing back a second portion through the

network (Figs. 1, 11, and 12; paragraphs [0083] – [0085]). Furthermore, Utsunomiya et al. discloses using VSM logic of the PVR to track locations of each of the portions stored on the separate memory devices (Figs. 1 and 11; paragraphs [0083] – [0086] and [0098]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the teaching of recording a portion of a program onto a different memory when the first memory is full and to use the virtual storage management logic to track all the portions of the program as disclosed by Utsunomiya et al. with the PVR as described by Browne et al. in view of Boyle in order to allow the PVR to use the memories to their fullest capabilities as well as to efficiently playback recordings when a portion of a program is recorded in the first memory and another portion of the program is recorded in the second memory.

Regarding claim **20**, Browne et al. in view of Boyle in view of Utsunomiya et al. discloses all the limitations as previously discussed with respect to claim 1 including that the VSM logic is configured as part of the PVR (Boyle: Fig. 1; col. 6, lines 38-58; Utsunomiya et al.: paragraphs [0086] and [0098]).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Heather R. Jones whose telephone number is 571-272-

7368. The examiner can normally be reached on Mon. - Thurs.: 7:00 am - 4:30 pm, and

every other Fri.: 7:00 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John Miller can be reached on 571-272-7353. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Heather R Jones
Examiner
Art Unit 2621

HRJ
February 15, 2008

JOHN MILLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600